Tracking wellbeing outcomes during the COVID-19 pandemic (October 2021): Putting the worst behind us?

ANU Centre for Social Research and Methods

Professor Nicholas Biddle[1] and Professor Matthew Gray[1]

1 ANU Centre for Social Research and Methods

Australian National University

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Abstract

This paper explores the views, outcomes, and attitudes of Australians at a time when the south-east of the country was starting to emerge from lockdown, and vaccination rates were approaching thresholds allowing for a greater easing of restrictions. The analysis is based on the October 2021 wave of the ANUpoll series of surveys, which forms part of the ANU Centre for Social Research and Methods' COVID-19 Impact Monitoring survey program. Respondents are from the Life in Australia™ panel, Australia's only probability-based source of online and offline survey participants. We find that slightly more than half of adult Australians thought that 'the worst of the pandemic is behind us', with the remaining 45.4 per cent still thinking that 'the worst is still to come.' Our findings also suggest that while there had been some improvement in key outcomes between August and October 2021 – life satisfaction, hours worked, and income all had increased – other outcomes appeared to have worsened due to the lingering impact of the relatively large third-wave of infections and associated lockdown measures. While it may be the case that the worst of the COVID-19 pandemic is behind us, it is clear that ongoing impacts will be felt by the population.

The data is available through the Australian Data Archive (DOI: 10.26193/THF1VZ) with data visualisation and stories on this and other papers available through https://whataustraliathinks.org.au/

Executive summary

This paper provides a summary of economic and social wellbeing data from the October 2021 ANUpoll, the ninth poll in the ANU Centre for Social Research and Methods Impact Monitoring Survey program.

General views on the pandemic

- Australians are more or less evenly split on whether they think the worst aspects of the pandemic are over, with 54.6 per cent thinking that the worst of the pandemic is behind us, with the remaining 45.4 per cent thinking that the worst is still to come.
    - Australians are more optimistic than Americans, with 45 per cent of Americans saying the worst of the pandemic is behind them and 54 per cent saying the worst is still to come.

COVID-specific measures

- Rates of anxiety and worry due to COVID-19 were similar in October 2021 to what they were in August 2021 (about six-in-ten reported they were anxious or worried).
- The proportion of Australians who think it is likely that they will be infected by COVID-19 in the next 6 months continued to increase.
    - After a near tripling from April 2021 to August 2021 – from 10.7 per cent to 30.8 per cent – expectations of infection increased again to two-in-five Australians (40.0 per cent) in October 2021
    - Those Australians who had been vaccinated were more likely to think they would be infected than those who hadn't, implying that people expect that vaccination may reduce hospitalisation and mortality whilst still leaving people exposed to mild cases of COVID-19

Life satisfaction and mental health

- Life satisfaction increased slightly between August and October 2021 from 6.52 to 6.63 (on a scale of 0 to 10).
    - These rates were comparable to October 2020 as Australia was emerging from its second wave of infections, but still well below the pre-COVID life satisfaction peak in October 2019, as well as life satisfaction in November 2020 (when life satisfaction was highest during the COVID-period).
- The increase in life satisfaction between August and October 2021 was almost entirely due to an increase in life satisfaction in New South Wales, with little change, or even a slight worsening, in the other states or territories.
- Controlling for life satisfaction in August 2021, those who had received at least one COVID-19 vaccination had a life satisfaction that was 0.55 higher than those who had not been vaccinated.
    - This provides some initial evidence that the rapid vaccine uptake since the August 2021 survey may have supported an improvement in wellbeing.
- There was, however, a worsening in psychological distress between August and October 2021.
    - While levels of psychological distress in October 2021 were not above the levels observed in April and October 2020, they were significantly above the level in August 2021, as well as pre-COVID.

  - Psychological distress worsened over the August to October 2021 period for four age groups: 18 to 24 years; 25 to 34 years; 35 to 44 years and 75 years and older.
  - There was also an increase in severe psychological distress, reaching the highest level observed during the COVID-19 period – 12.5 per cent of adult Australians.

Economic outcomes

- Hours of work has continued to increase. At an average of 20.9 hours per week hours worked, it is at its highest level during the COVID-19 period.
- By October 2021, average household income was $1,701 per week, an increase from the August 2021 value of $1,665 per week.
- In October 2021, 21.4 per cent of Australians didn't think they could get by on their current income, compared to 22.6 per cent in August 2021 and 23.2 per cent in April 2021.

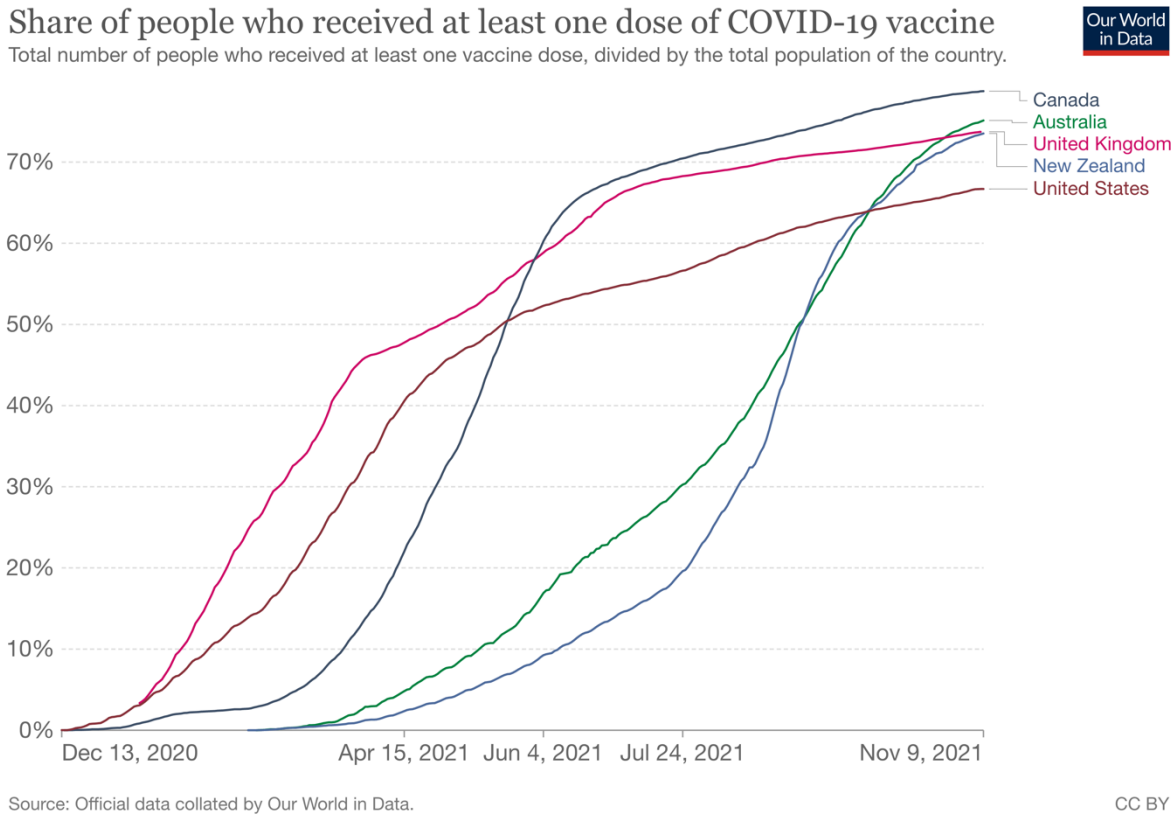
Views on institutions and their response to COVID-19

- The majority of Australians think that the Federal Government, the Prime Minister and the Opposition Leader have not done a good or excellent job.
- However, most Australians think that the public service, state/territory governments, and hospitals/the health system have done a good or excellent job.

1 Introduction and overview

On the 24th of May, 2021, the UK, US, and Canada were all estimated to have had more than 50 per cent of their population receive at least one dose of a COVID-19 vaccine (Figure 1). By contrast, at that time only 12.6 per cent of Australians had received a single vaccine dose with a far smaller share of the population (1.7 per cent) having received two doses. If we fast forward to November 8th, 2021, exactly three-quarters of Australians were estimated to have received at least one dose, well above the 66.7 per cent estimated for the US, slightly above the 73.7 per cent estimated for the UK and the 73.4 per cent for New Zealand, and converging on the 78.7 per cent first dose vaccination rate estimated in Canada.

Figure 1 Vaccination rates for selected countries including Australia – December 2020 to November 2021



This rapid increase in vaccination uptake of Australians has allowed many parts of the country, which were in lockdown conditions during the second and third quarters of 2021, to ease many of the internal restrictions that had been imposed. The Oxford Stringency Index collects systematic information on policy measures that governments have taken to tackle COVID-19 with scores ranging from 0 (the least restrictive) to 100 (the most restrictive).[1] The index was at a score of 74.5 in early October, but has now declined to 60.7.

Australia's two largest cities – Sydney and Melbourne – now have very few restrictions on activities that people can undertake, with most schools and workplaces opening up, and internal borders for the most part open (the border between Western Australia and most other states/territories is an exception). Even Australia's international border has opened to outbound travellers, with most of the restrictions on Australians returning home having been lifted. Restrictions on inbound travellers will soon be lifted without a need for quarantine, but

subject to vaccination verification.

There have been other times since the start of 2020 when Australians were living their lives with minimal covid-related restrictions. In mid-May 2021, the Oxford Stringency index was at a low of 36.6 with most internal borders open and very few other restrictions. However, at that stage, there was very little immunity in Australia to the coronavirus, and a justifiable concern that any breach of quarantine could lead to an outbreak in Australia and a return to lockdown conditions. Now, however, most governments and particularly those of jurisdictions where lockdowns have been longest and harshest have indicated that they are extremely reluctant to return to lockdowns in the future.

Australians are more or less evenly split on whether they think the worst aspects of the pandemic are over. In the survey analysed in depth in this paper, slightly more than half (54.6 per cent) of Australians thought that the worst of the pandemic is behind us, with the remaining 45.4 per cent thinking that the worst is still to come. Australians are, however, more optimistic than Americans. A survey conducted between August 23rd and 29th, 2021[2] found that 54 per cent of Americans thought that the worst is still to come compared to 45.4 per cent of Australians. Australia has had far fewer cases and deaths from the COVID-19 pandemic than the US, and Australians appear more likely to think that we have entered a more stable post-COVID situation.

That does not mean though that there have not been, or will not continue to be, ongoing impacts of the pandemic on the lives of Australians. The aim of this paper is explore the views, outcomes, and attitudes of Australians at a time when the south-east of the country was starting to emerge from lockdown, and when vaccination rates were approaching thresholds allowing for a greater easing of restrictions. The analysis is based on the October 2021 wave of the ANUpoll series of surveys, which forms part of the ANU Centre for Social Research and Methods' COVID-19 Impact Monitoring survey program. Respondents are from the Life in Australia™ panel, Australia's only probability-based source of online and offline survey participants.

The October 2021 survey collected data from 3,474 Australians aged 18 years and over. The data collection occurred between the 12th and 26th of October 2021 with 54.0 per cent of the eventual sample completing the survey on the 13th or 14th of October. The vast majority (96.8 per cent) of interviews were completed online with 3.2 per cent being completed over the phone. More detail on the survey is available in Appendix 1), and the survey data is available for download through the Australian Data Archive.

Surveys had also been conducted with the same group of respondents in January and February 2020, just before the COVID-19 pandemic started in Australia; as well as in April, May, August, October, and November 2020 after the pandemic started to cause major impacts in Australia, as well as during and just after the second wave of infections that were concentrated on Victoria. In 2021, data was collected in January, April and August, which combined allows us to track how outcomes have changed for the same group of individuals from just prior to COVID-19 impacting Australia, as well as during the most impactful times for the country.

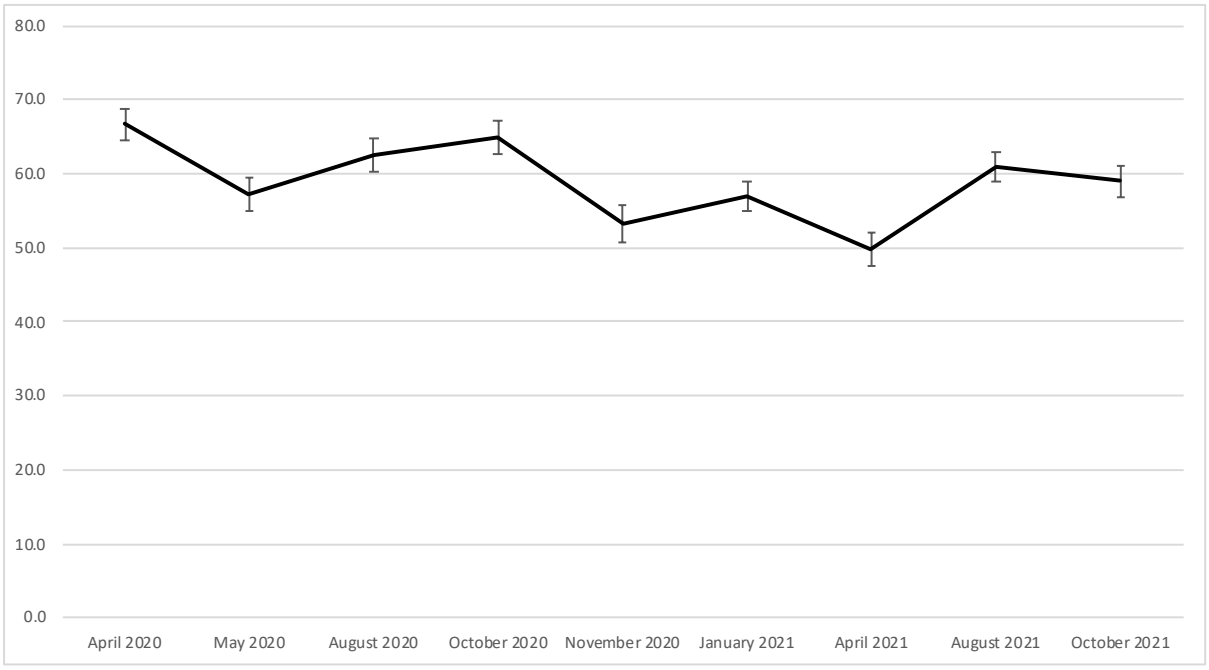
The structure of the remainder of the paper is as follows. In the next section we discuss two COVID-19 specific measures – anxiety and worry, and fear of infections. In Section 3 we focus on changes in life satisfaction with the section that follows focusing on psychological distress. In Section 5 we consider changes in economic measures, whereas in the final section of results (Section 6) we turn to Australians' views about key institutions. In Section 7 we provide some

concluding comments.

2 COVID-19 specific measures

A key measure of the general experience of the COVID-19 period is people's level of anxiety and worry due to the virus. Between April and August 2021, there was a substantial increase in the proportion of Australians who reported that they had experienced anxiety or worry due to COVID-19, from 49.8 per cent to 60.9 per cent (the highest recorded since October 2020). Rates of anxiety and worry due to COVID-19 were similar in October 2021 to what they were in August 2021, as highlighted in Figure 2.

Figure 2 Per cent of Australians reporting anxiety and worry due to COVID-19, April 2020 to October 2021

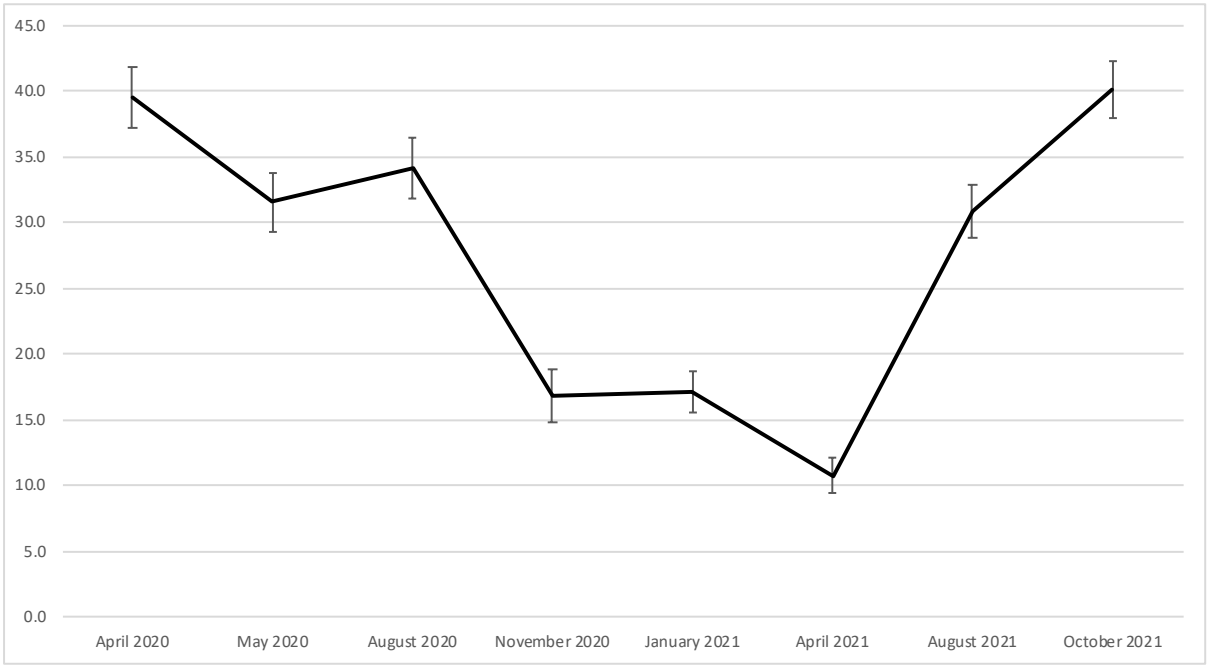


Note: The "whiskers" on the bars indicate the 95 per cent confidence intervals for the estimate.

Source: ANUpoll: April, May, August, October, and November 2020; and January, April, August, and October 2021

Although the proportion of the population who reported having anxiety and worry due to COVID-19 did not change between August and October 2021, the proportion of Australians who think it is likely that they will be infected by COVID-19 in the next 6 months continued to increase (Figure 3). As shown in Figure 3, after a near tripling from April 2021 to August 2021 – from 10.7 per cent to 30.8 per cent – expectations of infection increased again to two-in-five Australians (40.0 per cent) in October 2021 thinking that they will be infected by COVID-19 over the subsequent six months. This is a similar level to the previous peak of 39.5 per cent which occurred during the early stages of the pandemic in Australia in April 2020.

Figure 3 Per cent of Australians who thought it was likely or very likely that they would be infected by COVID-19 in the next six months, April 2020 to October 2021



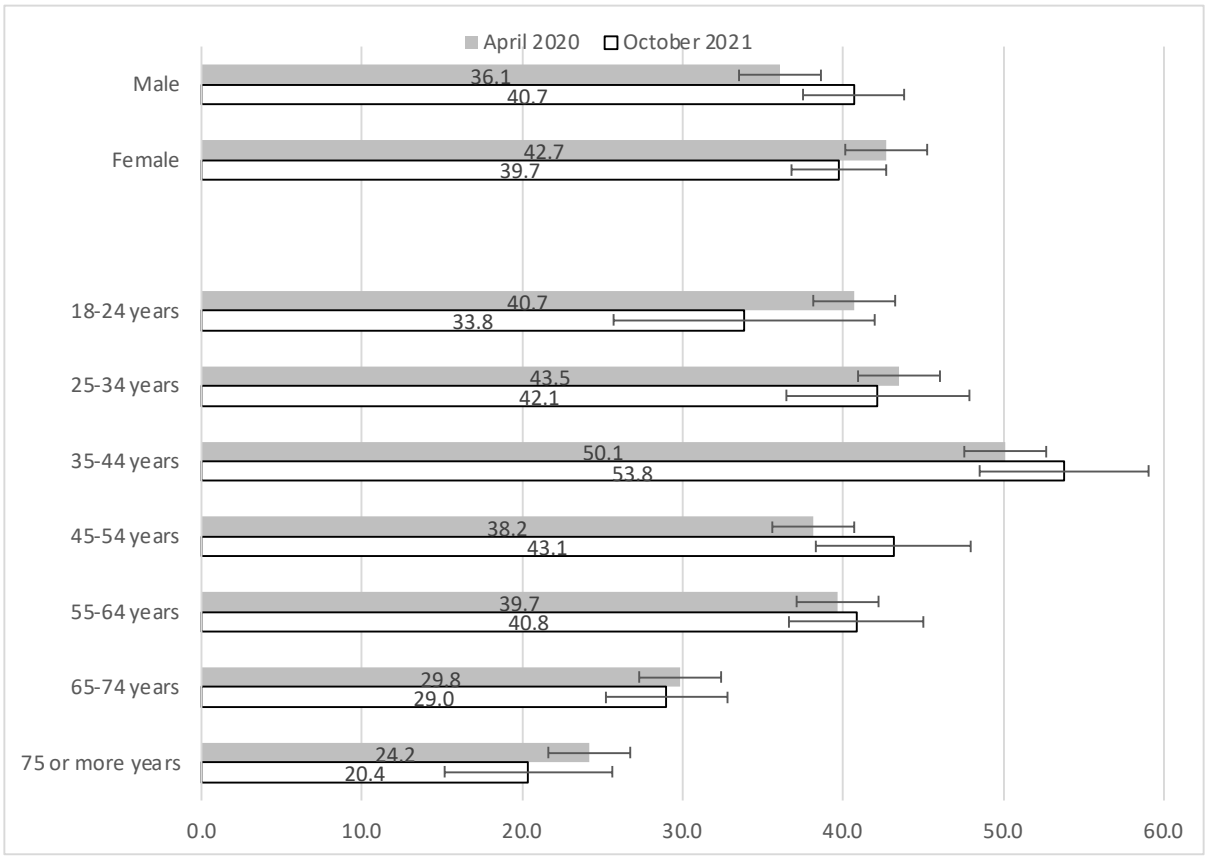
Note: The "whiskers" on the bars indicate the 95 per cent confidence intervals for the estimate.

Source: ANUpoll: April, May, August, and November 2021; and January, April, August, and October 2021

While, in October 2021 the expected likelihood of being infected by COVID-9 had increased to a similar level reported during the very early months of the pandemic, changes in the expected likelihood of infection in the next six-months differ between population groups (Figure 4). During the early stages of the pandemic, women were significantly more likely to think they would be infected in the next six months than men were. By October 2021, there were no differences between women and men. There appears to have been a widening in age differences in expected likelihood of infection over the pandemic period, although the standard errors are reasonably large for some age groups meaning that this finding should be treated with some caution.

The expected likelihood of infection has declined for those at the lower and upper end of the age distribution, whereas they seem to have increased for those in the middle part of the distribution. Indeed, more than half of those aged 35 to 44 years (53.8 per cent) think they will be infected in the next six months, compared to one-in-five of those aged 75 years or older.

Figure 4 Per cent of Australians who thought it was likely or very likely that they would be infected by COVID-19 in the next six months by age and sex, April 2020 and October 2021



Note: The "whiskers" on the bars indicate the 95 per cent confidence intervals for the estimate.

Source: ANUpoll: April, May, August, and November 2020; and January, April, August, and October 2021

Another difference between the April 2020 and October 2021 data is that in the early stages of the pandemic, those who thought they would be infected may have been worried that they were likely to become very unwell including long-term health impacts or even death. In October 2021, however, Australia's high vaccination rates mean that hospitalisation and mortality risk is much lower. In fact, those Australians who had not been vaccinated were less likely to think they would be infected in the next six months (29.5 per cent) compared to those who had been vaccinated (41.5 per cent).

In a subsequent paper in this series we will consider the predictors of vaccine uptake. Preliminary analysis suggests that those who are concerned about infection are more likely to get vaccinated. That is, there is a degree of reverse causality with regards to fear of infection and vaccination. However, it also appears to be the case that, at least to a certain extent, being vaccinated is associated with a higher perceived likelihood of infection.

In statistical modelling of the factors associated with the likelihood of being infected with COVID-19 (presented in Table 1), we control for lagged fear of infection (observed in January 2021 prior to the vaccine roll-out) as well as a range of observable characteristics that are predictive of vaccine uptake. In this modelling, we still find that current vaccination status is predictive of current fear of infection.

It is never possible to prove causality with observational data. The modelling presented in Table

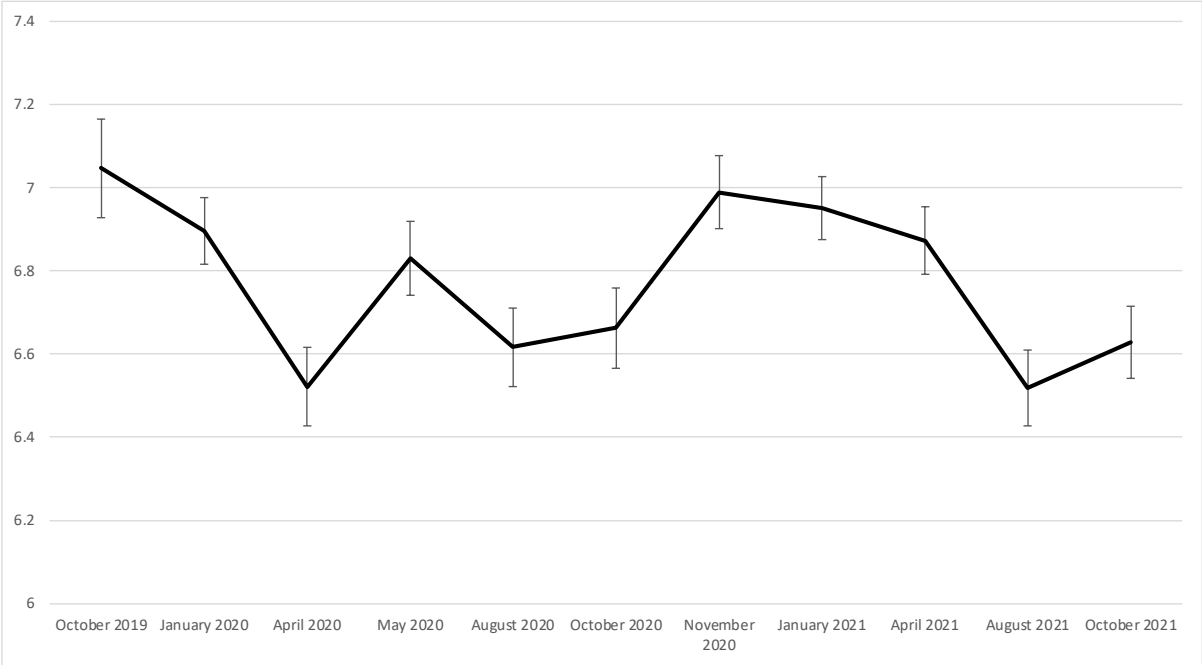
1 does suggest though that those who have been vaccinated accept that there is still an infection risk, even if the risk of hospitalisation and mortality is low.

3 Life satisfaction

Each of the nine ANU COVID-19 Impact Monitoring surveys has asked respondents 'The following question asks how satisfied you feel about life in general, on a scale from 0 to 10. Zero means you feel 'not at all satisfied' and 10 means 'completely satisfied'. Overall, how satisfied are you with life as a whole these days?' We asked the same question in January 2020 during the Black Summer bushfire crisis and in October 2019 prior to either of these events.

Between April and August 2021, as much of the south-east of Australia entered what would end up being a months-long outbreak and lockdown without significant vaccine protection, life satisfaction in Australia declined significantly and substantially. By mid-October 2021, as lockdown restrictions had finally begun to be eased and vaccination rates started to exceed those of a number of comparable countries, life satisfaction increased slightly from 6.52 to 6.63 (Figure 5). These rates were comparable to October 2020 as Australia was emerging from its second wave of infections, but still well below the pre-COVID level of life satisfaction in October 2019, as well as the COVID-life satisfaction-peak in November 2020.

Figure 5 Life satisfaction in Australia, October 2019 to October 2021



Note: The "whiskers" on the bars indicate the 95 per cent confidence intervals for the estimate.

Source: ANUpoll: October 2019; January, April, May, August, October, and November 2020; and January, April, August, and October 2021

The increase in life satisfaction between August and October 2021 was almost entirely due to an increase in life satisfaction for people in New South Wales, with little or no change in the other states or territories. Limiting the analysis to survey respondents who completed both the August and October 2021 surveys (the linked sample), the average change for Australia's largest state was 0.31. This was the only jurisdiction with a significant increase over the period, with Queensland being the only other jurisdiction with a positive value (0.13). This is perhaps not surprising, as NSW had the largest decline in life satisfaction between April and August

2021 and had already started to ease lockdown restrictions by the time data collection for the October ANUpoll had commenced. The other two lockdown jurisdictions (ACT and Victoria) were yet to emerge from lockdown by the time most respondents had completed their survey.

In order to understand the individual level factors associated with changes in life satisfaction at the individual level, two regression models are estimated. The dependent variable is life satisfaction in October 2021, while life satisfaction August 2021 is included as an explanatory variable. The inclusion of a lagged value of the dependent variable means that the model is effectively measuring the factors associated with changes in life satisfaction. Given that life satisfaction is measured on a scale from 0-10, a linear model can be used.

The first model includes as explanatory variables a range of demographic, socioeconomic and geographic characteristics (Model 1). The second model adds to the explanatory variables in the first model vaccination status (Model 2).

In Model 1 (Appendix Table 2), the two strongest factors associated with change in life satisfaction are age and geographic location. Holding constant other characteristics (including life satisfaction in August), life satisfaction was 0.38 higher for someone aged 65 to 74 years compared to someone aged 35 to 44 (the base case), whereas for those aged 75 plus it was 0.51 higher. Geographically, there were also some differences not touched on earlier, with regional NSW having lower values than Sydney. Melbourne and the rest of Victoria also had lower values than Sydney, with other jurisdictions being somewhere in between. Controlling for these differences, those with an undergraduate degree and those in the most advantaged areas of Australia also experienced a relatively large improvement in life satisfaction.

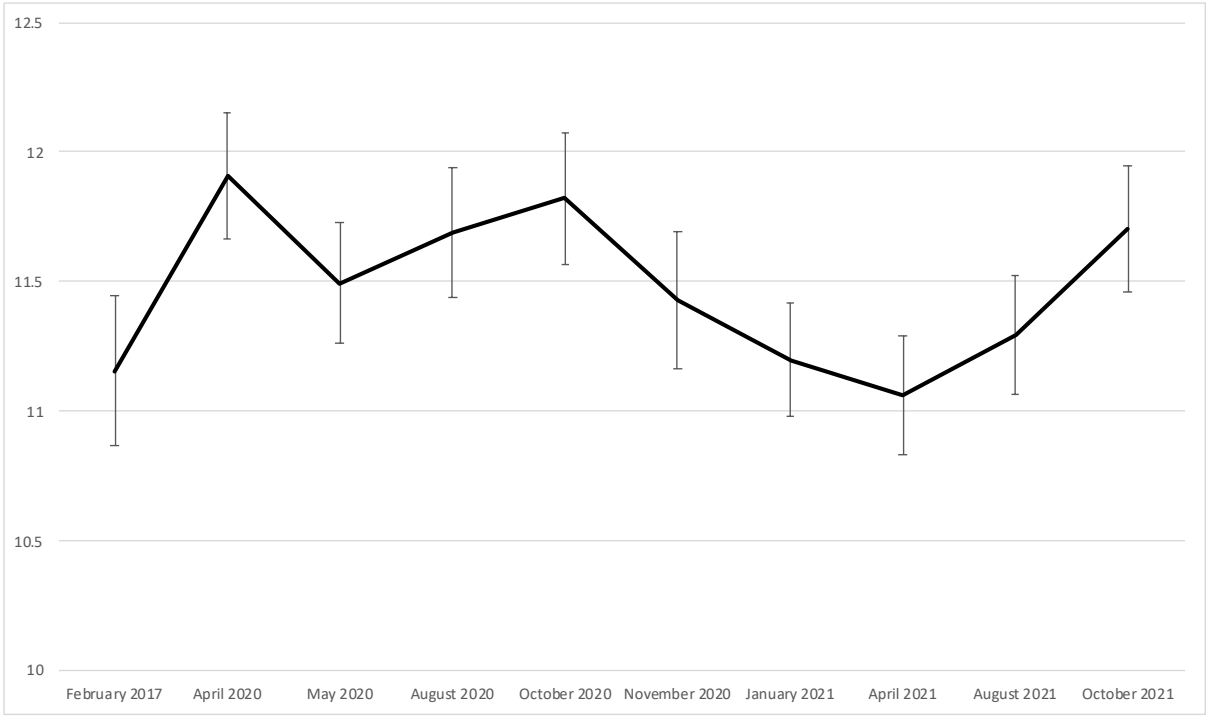
The estimates of Model 2 show that having received at least one COVID-19 vaccination is associated with an increase in life satisfaction of 0.55 compared to an otherwise similar person who had not been vaccinated (Appendix Table 2). Once again, it is very difficult to establish causal relationships with observational data. However, the regression results provide some initial evidence that the rapid vaccine uptake since the August 2021 survey may have supported an improvement in wellbeing.

4 Mental health

While there has been an improvement in life satisfaction between August and October 2021, Australia's mental health appears to have worsened over the same period. The Kessler (K6) comprises six items and has been widely used and validated in many epidemiological studies (Kessler et al. 2002). Specifically, the K6 questions ask the respondent how often in the last four weeks they felt: 'nervous'; 'hopeless'; 'restless or fidgety'; 'so depressed that nothing could cheer you up'; 'that everything was an effort'; and 'worthless'. There were five response categories, from "none of the time" to "all the time", with values ranging from 1 through 5. The K6 items can be summed to produce an index, with potential values ranging from 6 to 30.

Figure 6 reports the average values for the Kessler-6 measure of psychological distress for the nine waves of data collection over the COVID-19 period, as well as pre-COVID data from February 2017. While levels of psychological distress in October 2021 were not above the April and October 2020 peaks, they were significantly above the levels founds in August 2021, as well as in February 2017.

Figure 6 Psychological distress in Australia, February 2017 to October 2021

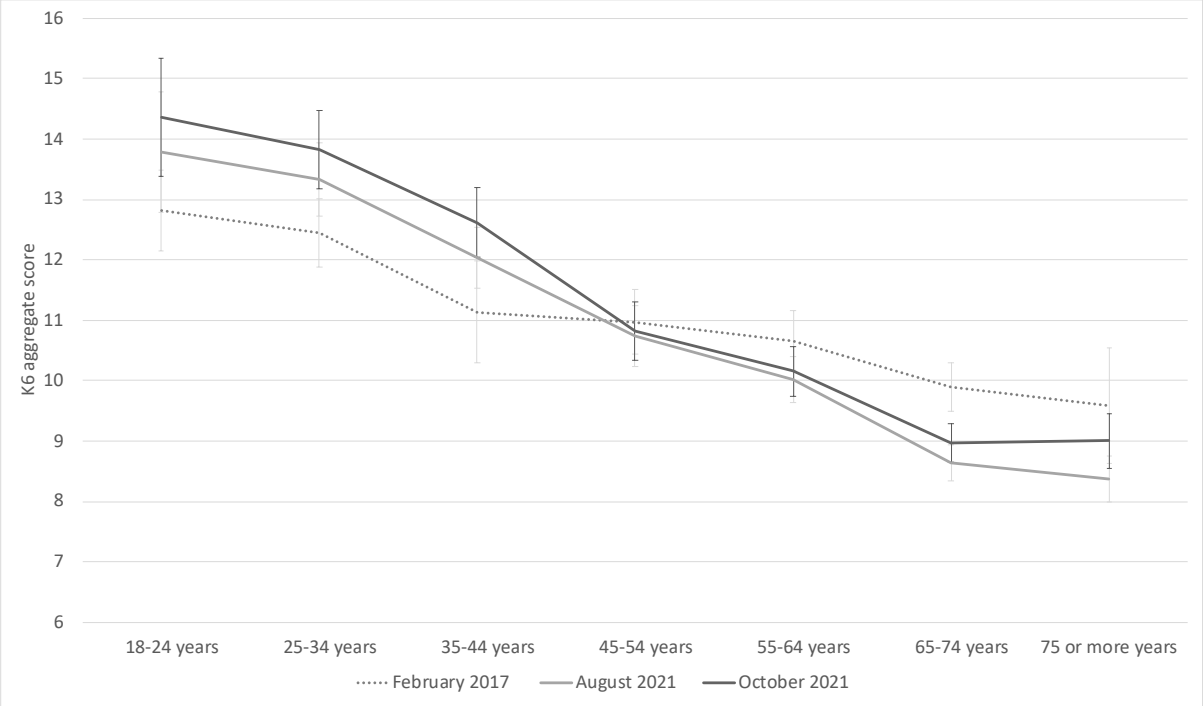


Note: The "whiskers" on the bars indicate the 95 per cent confidence intervals for the estimate.

Source: Life in Australia: February 2017. ANUpoll: January, April, May, August, October, and November 2020; and January, April, August, and October 2021

The worsening in psychological distress over the period August to October 2021 is found for four age groups (Figure 7) – 18 to 24 years (4.19 per cent increase); 25 to 34 years (3.72 per cent increase); 35 to 44 years (4.84 per cent increase); and 75 years and older (7.57 per cent increase). Compared to pre-COVID, however, the greatest increase in psychological distress has still been amongst young people.

Figure 7 Psychological distress in Australia by age, February 2017, August 2021 and October 2021



Note: The "whiskers" on the bars indicate the 95 per cent confidence intervals for the estimate.

Source: Life in Australia: February 2017. ANUpoll: August and October 2021

The Kessler-6 aggregate measure of psychological distress is impacted by changes across the distribution of mental health outcomes. While this is useful as a summary measure, from a public health and public policy perspective, it is those who are at risk of severe mental illness that are of most concern. People with a sum of 11 to 18 out of a possible maximum of 30 are categorized as experiencing *moderate* psychological distress. This group can be considered to be struggling with mental distress levels that indicate a need for mental health support, but are not at risk of clinical levels of mental health problems like those in the serious category (Prochaska et al, 2012). Those with a K6 sum of 19 or higher out of a possible maximum of 30 are categorized as experiencing *severe* psychological distress consistent with having a 'probable serious mental illness'.

In February 2017, 8.4 per cent of Australians were estimated to be experiencing severe psychological distress. In the initial stages of the pandemic (April 2020), this had increased to 10.6 per cent with some fluctuation around this level between then and August 2021. Between August and October 2021, however, there was another large increase to 12.5 per cent of Australians experiencing severe psychological distress. This increase is not only statistically significant, but has led to the highest level of severe psychological distress observed over the COVID-19 period.

5 Employment and income

Economically, Australia has proved to be remarkably resilient in 2021, despite the lengthy lockdown in much of the south-east of the country, as well as the removal of many of the key labour market supports and the increased value of social security payments that were put in place in the early days of the pandemic.

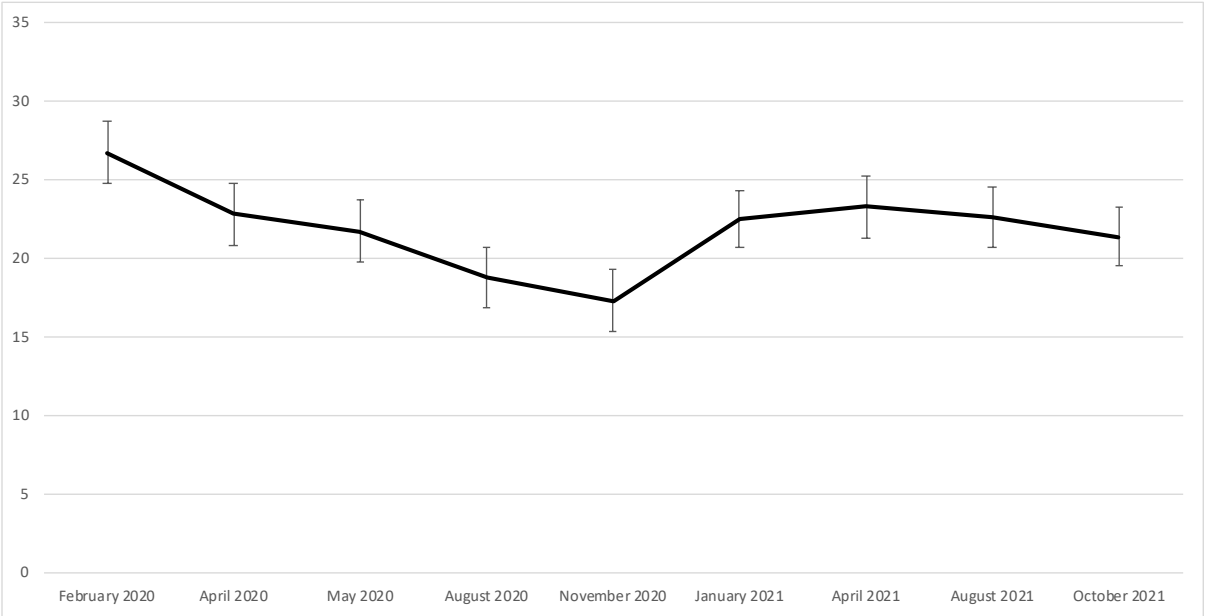
Following a substantial fall in hours worked during the early stages of the pandemic, hours of work have recovered over time and this has continued between August and October 2021. Average hours increased by 0.3 hours per week from 20.6 hours in August 2021 (with the hours for those who were not in paid employment set to zero) to 20.9 hours per week in October 2021. Average hours worked in October 2021 are at the highest level observed during the COVID-19 period.

Household income continues to increase. Each wave of the ANUpoll COVID-19 Impact Monitoring Surveys, and the February 2020 survey, have asked respondents the following question: 'Please indicate which of the following describes your household's total income, after tax and compulsory deductions, from all sources?' Respondents are then asked to choose from one of ten income categories.[3] These categories have been converted into a continuous income measure using interval regression.

In February 2020, we estimated average income to be $1,795 per week. By April 2020 this had fallen to $1,632, a fall of 9.1 per cent. Income then fluctuated over the pandemic period, partly in response to economic circumstances and partly in response to changes in transfer payments. By October 2021, average household income was $1,701 per week, an increase from the August 2021 value of $1,665 per week. We have not adjusted our income estimates for inflation, as unlike some other countries, CPI increases have been relatively low in Australia.[4] It is important, however, to monitor cost of living pressures as the service sector continues to open up and supply constraints impact on the prices of many goods.

Some evidence for an absence of cost-of-living pressure, at least up until October 2021, can be seen in Figure 8, which gives the per cent of Australians who felt that they weren't able to make ends meet on their current income. In October 2021, 21.4 per cent of Australians didn't think they could get by on their current income, compared to 22.6 per cent in August 2021 and 23.2 per cent in April 2021. Although these differences were not statistically significant, it would appear that this measure of financial stress (which relates to both expenditure and income) is at the very least not worsening.

Figure 8 Per cent of Australians who felt they weren't able to get by on current income, February 2020 to October 2021



Note: The "whiskers" on the bars indicate the 95 per cent confidence intervals for the estimate.

Source: Life in Australia: February 2020. ANUpoll: January, April, May, August, October, and November 2020; and January, April, August, and October 2021

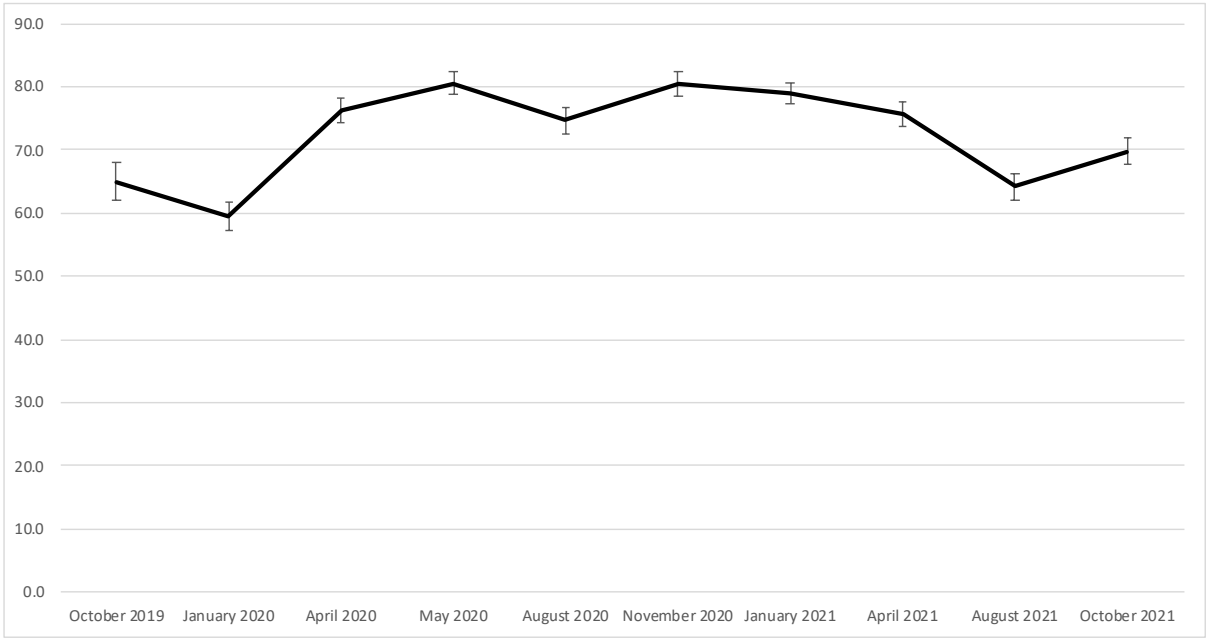
6 The views of Australians towards pandemic management

6.1 Satisfaction with the direction of the country

Respondents were asked at the start of the October 2021 survey (and in every survey since October 2019) 'Firstly, a general question about your views on living in Australia. All things considered, are you satisfied or dissatisfied with the way the country is heading?' Combining those who were satisfied or very satisfied, there was a significant and substantial decline in satisfaction between April and August 2021 (Figure 9), but a small and statistically significant increase between August and October 2021.

Australians are still not as satisfied in the direction of the country as they were throughout 2020 when around four-in-five Australians were either satisfied or very satisfied. However, satisfaction does appear to have improved somewhat since the third-wave of infections when much of the south-east of Australia was in lockdown.

Figure 9 Per cent of Australians who were satisfied or very satisfied with the direction of the country – October 2019 to October 2021.



Note: The "whiskers" on the bars indicate the 95 per cent confidence intervals for the estimate.

Source: ANUpoll: January, April, May, August, October, and November 2020; and January, April, August, and October 2021

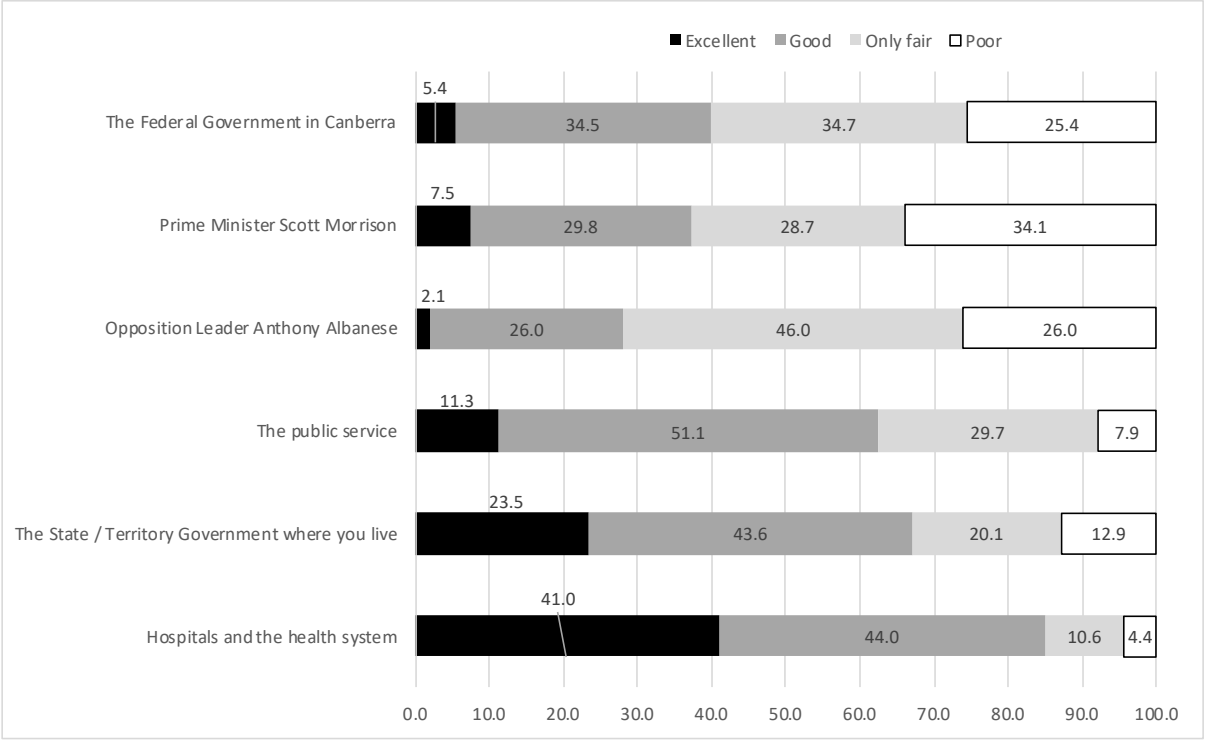
6.2 Views on the handling of the pandemic

While a high proportion of Australians are satisfied with the direction of the country, that does not necessarily mean that they attribute Australia's relative success to key institutions. Indeed, many Australians think that key individuals and institutions have done a relatively poor job during the pandemic. Specifically, respondents were asked 'How would you rate the job each of the following is doing responding to the coronavirus outbreak…?' with six key institutions and individuals asked about. Response options ranged from excellent, to good, only fair, and poor.

Figure 10 suggests that Australians do not think their political leaders are doing well (or have done well) during the pandemic, particularly at the federal level. Only 5.4 per cent of Australians think the Federal Government is doing an excellent job with 34.5 per cent thinking it is doing a good job. Rather than being an asset for the government, it would appear that the Prime Minister is if anything viewed slightly more poorly than the Federal Government generally. Only 7.5 per cent of Australians thought that Prime Minister Scott Morrison is doing an excellent job, with a further 29.8 per cent thinking that he was doing a good job. Views on Opposition Leader Anthony Albanese were even more negative than for the Prime Minister or the Federal Government, with 2.1 per cent thinking he is doing an excellent job and 26.0 per cent thinking he is doing a good job.

Australians are more positive towards the state/territory government and non-political institutions. A combined 62.4 per cent think the public service is doing an excellent (11.3 per cent) or good job (51.1 per cent) responding to the coronavirus outbreak. An even greater percent – 67.1 per cent – think the State/Territory government where a person lives was doing an excellent (23.5 per cent) or good (43.6 per cent) job. The institution with the greatest support is hospitals and the health system, with around two-in-five Australians (41.0 per cent) thinking they are doing an excellent job and a further 44.0 per cent thinking they are doing a good job.

Figure 10 Views on the job that key institutions and national political leaders are doing in response to the pandemic – October 2021.



Source: ANUpoll: October 2021.

A person's personal circumstances, and in particular their change in circumstances over the pandemic period, are key determinants of their views on institutions and national political leaders are doing in response to the pandemic. Regression models of the individual-level factors associated with views about how well each of the six institutions asked about are doing in response to the pandemics have been estimated. Given that views about how key

institutions and political leaders are doing is measured on a four-point scale, an Ordered Probit is an appropriate statistical model. Two sets of models are estimated. The first set of models includes as explanatory variable a range of demographic, geographic and socioeconomic characteristics as explanatory variables (Appendix Table 3a). The second set of models (Appendix Table 3b), in addition, controls for changes in life satisfaction between January 2020 and October 2021, as well as changes in income and hours worked between February 2020 and October 2021. We also control for baseline life satisfaction, income, and hours worked prior to the pandemic. This is only possible to do with the longitudinal data collected as part of the COVID-19 impact monitoring program

We consistently find that those who have experienced a relative improvement in life satisfaction over the COVID-19 period are more likely to report that key institutions are doing a good job. The strongest relationships (in terms of effect size) are for the Federal Government in Canberra, Prime Minister Scott Morrison, State/Territory governments, and Hospitals and the Health system. Changes in economic circumstances are less important, though there is a positive association with changes in hours worked and views on the public service.

Leaving aside changes in individual circumstances, there are also a number of characteristics of individuals that are predictive of their views on institutions. Females tend to be more positive, particularly with regards to the Opposition Leader, State/Territory governments, and the health system. Older Australians also tend to be more positive, though not with regards to the Opposition Leader or the public service.

Most of the other demographic or socioeconomic measures do not appear to have a strong association. The main exception to this is views on State/Territory government and the relationship with education. Specifically, those with relatively high levels of education are more likely to think that State/Territory governments are doing a good or excellent job, and less likely to think they are doing a poor or fair job.

Where a person lives also had a strong association with views on key institutions. Those who live in Sydney tended to have more positive views towards the Federal Government, Prime Minister Scott Morrison, the public service, and the health system. However, those who lived outside of NSW/Victoria were the most likely to have a positive view towards their State/Territory government.

7 Concluding comments

In mid-October 2021, vaccination rates in Australia were surging, much of the south-east of the country was emerging from months-long lockdowns, and the other five states/territories appeared to be maintaining close to zero infection rates. When surveyed, slightly more than half (54.6 per cent) of adult Australians thought that 'the worst of the pandemic is behind us', with the remaining 45.4 per cent still thinking that 'the worst is still to come.' Although it could not have been known for sure at the time, the very high vaccination rates and ongoing restrictions would lead to a drop in COVID-19 cases from the October 10th peak of 89.5 confirmed cases per million people.

At the same time, we asked representative sample of adult Australians about their views on whether the worst of COVID-19 was ahead of us or behind us. We also asked about a range of other attitudes, behaviours and outcomes. Our general finding was that there had been some improvement in key outcomes – life satisfaction, hours worked, and income – but that other outcomes appeared to be driven by the lingering impact of the relatively large third-wave of

infections and associated lockdown measures. We found that 12.5 per cent of Australians were experiencing severe psychological distress, the largest percentage that we had measured over nine-waves of COVID-19 impact monitoring.

While it may be the case that the worst of the COVID-19 pandemic is behind us, there are clearly still ongoing impacts being felt by the population.

Australians appear to have reasonably clear views on the individuals and institutions that should be credited for the positive aspects of the COVID-19 response, and those that have not done so well. Most Australians think that the Federal Government, the Prime Minister and the Opposition Leader have done either a fair or poor job, as opposed to a good or excellent job. However, most Australians think that the public service, state/territory governments, and hospitals/the health system have done a good or excellent job.

References

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Prochaska, J.J., Sung, H.Y., Max, W., Shi, Y. and Ong, M., 2012. Validity study of the K6 scale as a measure of moderate mental distress based on mental health treatment need and utilization. International journal of methods in psychiatric research, 21(2), pp.88-97.

Appendix 1 About the survey

Data collection for the October 2021 ANUpoll commenced on the 12th of October 2021 with a pilot test of telephone respondents. The main data collection commenced on the 13th of October and concluded on the 26th of October. The final sample size for the survey is 3,474 respondents. 54.3 per cent of the sample had completed the survey by the 14th of October and the average interview duration was 21.7 minutes.

There was a large increase in longitudinal attrition compared to previous waves of data collection. Of those who had completed the August 2021 survey, 86.7 per cent (N=2,717) had completed the April 2021 survey. However, of those who had completed the October 2021 survey, only 69.3 per cent (N=2,407) had completed the April 2021 survey

The Social Research Centre collected data online and through Computer Assisted Telephone Interviewing (CATI) in order to ensure representation from the offline Australian population. Around 3.2 per cent of interviews were collected via CATI. The contact methodology adopted for the online Life in Australia™ members is an initial survey invitation via email and SMS (where available), followed by multiple email reminders and a reminder SMS. Telephone non-response of panel members who have not yet completed the survey commenced in the second week of fieldwork and consisted of reminder calls encouraging completion of the online survey.

The contact methodology for offline Life in Australia™ members was an initial SMS (where available), followed by an extended call-cycle over a two-week period. A reminder SMS was also sent in the second week of fieldwork.

A total of 4,329 respondents were invited to take part in the survey, leading to a wave-specific completion rate of 80.2 per cent. Taking into account recruitment to the panel, the cumulative response rate for this survey is around 7.0 per cent.

Unless otherwise stated, data in the paper is weighted to population benchmarks. For Life in Australia™, the approach for deriving weights generally consists of the following steps:

1. Compute a base weight for each respondent as the product of two weights:
    a. Their enrolment weight, accounting for the initial chances of selection and subsequent post-stratification to key demographic benchmarks
    b. Their response propensity weight, estimated from enrolment information available for both respondents and non-respondents to the present wave.
2. Adjust the base weights so that they satisfy the latest population benchmarks for several demographic characteristics.

The ethical aspects of this research have been approved by the ANU Human Research Ethics Committee (2021/430).

Appendix 2 Regression tables

Table 1 Factors associated with expected likelihood of infection, October 2021

Explanatory variables	Coeff.	Signif.
Thought it not at all likely in January 2021	-0.724	***
Thought it somewhat likely in January 2021	0.781	***
Thought it very likely in January 2021	1.213	***
Vaccinated in October 2021	0.275	**
Female	-0.068	
Aged 18 to 24 years	-0.513	***
Aged 25 to 34 years	-0.225	**
Aged 45 to 54 years	-0.291	***
Aged 55 to 64 years	-0.296	***
Aged 65 to 74 years	-0.521	***
Aged 75 years plus	-0.665	***
Indigenous	-0.319	
Born overseas in a main English-speaking country	0.071	
Born overseas in a non-English speaking country	-0.017	
Speaks a language other than English at home	-0.074	
Has not completed Year 12 or post-school qualification	-0.317	***
Has a post graduate degree	0.022	
Has an undergraduate degree	0.070	
Has a Certificate III/IV, Diploma or Associate Degree	-0.118	
Lives in the most disadvantaged areas (1st quintile)	0.088	
Lives in next most disadvantaged areas (2nd quintile)	0.179	*
Lives in next most advantaged areas (4th quintile)	0.081	
Lives in the most advantaged areas (5th quintile)	0.106	
Lives in non-capital city NSW	0.107	
Lives in Melbourne	0.115	
Lives in non-capital city Victoria	0.133	
Lives in another non-capital city	-0.076	
Lives in another capital city	-0.040	
Cut-point 1	-1.411	
Cut-point 2	0.192	
Cut-point 3	1.604	
Sample size	2,443	

Source: ANUpoll, January and October 2021

Notes: Ordered Probit Regression Models. The base case individual thought it not very likely to be infected by COBID-19 in next six months when asked in January 2021 and is male; aged 35 to 44 years; non-Indigenous; born in Australia; does not speak a language other than English at home; has completed Year 12 but does not have a post-graduate degree; lives in neither an advantaged or disadvantaged suburb (third quintile); and lives in Sydney. Coefficients that are statistically significant at the 1 per cent level of significance are labelled ***; those significant at the 5 per cent level of significance are labelled **, and those significant at the 10 per cent level of significance are labelled *.

Table 2 Factors associated with change in life satisfaction, August to October 2021

Explanatory variables	Model 1		Model 2	
	Coeff.	Signif.	Coeff.	Signif.
Life satisfaction in August 2021	-0.411	***	-0.417	***
Vaccinated in October 2021			0.552	***
Female	-0.088		-0.075	
Aged 18 to 24 years	-0.020		-0.021	
Aged 25 to 34 years	0.040		0.074	
Aged 45 to 54 years	0.040		0.052	
Aged 55 to 64 years	0.133		0.122	
Aged 65 to 74 years	0.382	***	0.321	**
Aged 75 years plus	0.511	***	0.453	***
Indigenous	0.303		0.286	
Born overseas in a main English-speaking country	-0.103		-0.104	
Born overseas in a non-English speaking country	-0.141		-0.142	
Speaks a language other than English at home	-0.089		-0.058	
Has not completed Year 12 or post-school qualification	-0.055		-0.021	
Has a post graduate degree	0.016		-0.040	
Has an undergraduate degree	0.224	*	0.184	
Has a Certificate III/IV, Diploma or Associate Degree	-0.013		-0.007	
Lives in the most disadvantaged areas (1st quintile)	-0.006		0.009	
Lives in next most disadvantaged areas (2nd quintile)	-0.044		-0.035	
Lives in next most advantaged areas (4th quintile)	0.150		0.148	
Lives in the most advantaged areas (5th quintile)	0.248	*	0.231	
Lives in non-capital city NSW	-0.283	*	-0.249	
Lives in Melbourne	-0.484	***	-0.466	***
Lives in non-capital city Victoria	-0.544	***	-0.502	***
Lives in another non-capital city	-0.171		-0.064	
Lives in another capital city	-0.336	***	-0.256	**
Constant	2.906	***	2.406	***
Sample size	2,313		2,309	

Source: ANUpoll, August and October 2021

Notes: OLS Regression Models. The base case individual is male; aged 35 to 44 years; non-Indigenous; born in Australia; does not speak a language other than English at home; has completed Year 12 but does not have a post-graduate degree; lives in neither an advantaged or disadvantaged suburb (third quintile); and lives in Sydney. Coefficients that are statistically significant at the 1 per cent level of significance are labelled ***; those significant at the 5 per cent level of significance are labelled **, and those significant at the 10 per cent level of significance are labelled *.

Table 3a Factors associated with views on handling of the pandemic (Model 1), October 2021

Explanatory variables	Federal Gov.		Prime Min.		Opposition		Public service		State/Territory Gov.		Health system	
	Coeff.	Signif.	Coeff.	Signif.	Coeff.	Signif.	Coeff.	Signif.	Coeff.	Signif.	Coeff.	Signif.
Female	0.088	*	0.058		0.150	***	0.024		0.239	***	-0.064	
Aged 18 to 24 years	-0.045		-0.184		0.075		-0.026		-0.078		0.097	
Aged 25 to 34 years	-0.059		-0.148	*	0.058		-0.041		-0.133		0.015	
Aged 45 to 54 years	0.295	***	0.304	***	-0.080		-0.042		0.088		0.142	
Aged 55 to 64 years	0.260	***	0.283	***	-0.012		-0.012		0.189	**	0.278	***
Aged 65 to 74 years	0.402	***	0.406	***	0.057		0.026		0.349	***	0.385	***
Aged 75 years plus	0.620	***	0.602	***	0.035		0.090		0.238	**	0.541	***
Indigenous	-0.165		-0.165		0.133		-0.372	**	-0.158		-0.540	***
Born overseas in a main English-speaking country	-0.022		-0.101		0.120		0.038		0.121		-0.072	
Born overseas in a non-English speaking country	0.197	**	0.076		0.168	*	0.100		-0.032		-0.185	**
Speaks a language other than English at home	0.091		0.156	*	-0.095		-0.065		-0.092		-0.160	*
Has not completed Year 12 or post-school qualification	0.009		0.117		-0.346	***	-0.311	***	-0.204	**	-0.083	
Has a post graduate degree	-0.060		-0.025		-0.017		0.129		0.188	**	0.144	
Has an undergraduate degree	-0.056		-0.113		-0.034		-0.011		0.146	*	0.118	
Has a Certificate III/IV, Diploma or Associate Degree	0.000		0.042		-0.146	*	-0.151	*	-0.084		-0.052	
Lives in the most disadvantaged areas (1st quintile)	0.199	**	0.067		0.025		0.015		0.073		-0.074	
Lives in next most disadvantaged areas (2nd quintile)	0.047		0.060		0.009		0.068		0.009		0.021	
Lives in next most advantaged areas (4th quintile)	0.078		0.034		0.009		0.040		0.020		0.129	
Lives in the most advantaged areas (5th quintile)	0.011		-0.005		-0.051		0.066		0.026		0.044	
Lives in non-capital city NSW	-0.304	***	-0.318	***	-0.013		-0.204	*	-0.311	***	-0.238	**
Lives in Melbourne	-0.372	***	-0.283	***	-0.092		-0.090		-0.278	***	-0.065	
Lives in non-capital city Victoria	-0.322	***	-0.168		-0.129		-0.339	***	-0.349	***	-0.327	***
Lives in another non-capital city	-0.105		0.013		-0.051		-0.192	**	0.280	***	-0.475	***
Lives in another capital city	-0.150	**	-0.086		-0.001		-0.170	**	0.280	***	-0.586	***
Cut-point 1	-0.569		-0.324		-0.692		-1.638		-1.023		-2.033	
Cut-point 2	0.381		0.438		0.559		-0.517		-0.287		-1.321	
Cut-point 3	1.781		1.614		2.029		1.034		0.953		0.017	
Sample size	3,317		3,318		3,251		3,298		3,322		3,324	

Source: ANUpoll, January 2020 and October 2021 and Life in Australia™, February 2020.

Notes: Ordered Probit Regression Model. The base case individual is male; aged 35 to 44 years; non-Indigenous; born in Australia; does not speak a language other than English at home; has completed Year 12 but does not have a post-graduate degree; lives in neither an advantaged or disadvantaged suburb (third quintile); and lives in a capital city. Coefficients that are statistically significant at the 1 per cent level of significance are labelled ***; those significant at the 5 per cent level of significance are labelled **, and those significant at the 10 per cent level of significance are labelled *.

Table 3b Factors associated with views on handling of the pandemic (Model 2), October 2021

Explanatory variables	Federal Gov.		Prime Min.		Opposition		Public service		State/Territory Gov.		Health system	
	Coeff.	Signif.	Coeff.	Signif.	Coeff.	Signif.	Coeff.	Signif.	Coeff.	Signif.	Coeff.	Signif.
Change in life satisfaction – Jan 20 to Oct 21	0.171	***	0.151	***	0.098	***	0.154	***	0.178	***	0.165	***
Life satisfaction – Jan 20	0.252	***	0.231	***	0.055	**	0.158	***	0.148	***	0.140	***
Change in hours worked – Feb 20 to Oct 21	0.002		0.000		-0.001		0.004	*	-0.001		-0.001	
Hours worked – Feb 20	0.001		0.001		-0.005	**	0.001		-0.002		-0.004	*
Change in income – Feb 20 to Oct 21	-0.066		-0.060		-0.017		0.016		0.017		0.020	
Income – Feb 20	-0.005		-0.007		-0.008		0.012		0.032		0.043	
Female	0.165	**	0.087		0.177	***	0.145	**	0.253	***	-0.067	
Aged 18 to 24 years	-0.257		-0.330	*	0.001		-0.039		-0.157		-0.173	
Aged 25 to 34 years	-0.088		-0.297	**	-0.068		-0.134		-0.227	**	-0.133	
Aged 45 to 54 years	0.356	***	0.277	**	-0.079		-0.082		0.134		0.049	
Aged 55 to 64 years	0.262	**	0.225	**	-0.118		-0.067		0.125		0.102	
Aged 65 to 74 years	0.281	**	0.231	*	-0.166		-0.038		0.261	**	0.007	
Aged 75 years plus	0.434	***	0.441	***	-0.116		0.033		0.005		0.194	
Indigenous	0.024		-0.031		0.139		-0.465	**	0.049		-0.603	***
Born overseas in a main English-speaking country	-0.067		-0.084		0.201	**	0.037		0.135		-0.065	
Born overseas in a non-English speaking country	0.236	*	0.067		0.223	*	0.134		0.032		-0.155	
Speaks a language other than English at home	0.151		0.243	*	-0.198		-0.096		-0.276	**	-0.258	**
Has not completed Year 12 or post-school qualification	0.109		0.195		-0.423	***	-0.286	**	-0.230	*	-0.134	
Has a post graduate degree	-0.221	*	-0.167		-0.011		0.149		0.122		-0.052	
Has an undergraduate degree	-0.211	**	-0.210	**	0.038		-0.090		0.034		-0.003	
Has a Certificate III/IV, Diploma or Associate Degree	-0.015		0.040		-0.145		-0.087		-0.158		-0.097	
Lives in the most disadvantaged areas (1st quintile)	0.347	***	0.207	*	0.132		0.191	*	0.086		-0.092	
Lives in next most disadvantaged areas (2nd quintile)	0.070		0.123		0.051		0.127		0.021		-0.002	
Lives in next most advantaged areas (4th quintile)	0.057		0.009		0.011		0.106		-0.094		0.164	
Lives in the most advantaged areas (5th quintile)	-0.095		-0.115		-0.006		0.176	*	-0.003		0.012	
Lives in non-capital city NSW	-0.370	***	-0.397	***	0.167		-0.118		-0.360	***	-0.243	*
Lives in Melbourne	-0.286	**	-0.227	*	0.096		0.095		-0.126		-0.071	
Lives in non-capital city Victoria	-0.279	**	-0.096		-0.010		-0.260	*	-0.436	***	-0.464	***
Lives in another non-capital city	-0.292	**	-0.218	*	-0.008		-0.171		0.214	*	-0.630	***
Lives in another capital city	-0.207	**	-0.136		0.124		-0.182	*	0.300	***	-0.655	***
Cut-point 1	1.037		1.138		-0.408		-0.462		-0.231		-1.612	
Cut-point 2	2.038		1.905		0.873		0.705		0.490		-0.866	
Cut-point 3	3.610		3.204		2.441		2.391		1.862		0.605	
Sample size	0.171	***	0.151	***	0.098	***	0.154	***	0.178	***	0.165	***

Source: ANUpoll, January 2020 and October 2021 and Life in Australia™, February 2020.

Notes: Ordered Probit Regression Model. The base case individual is male; aged 35 to 44 years; non-Indigenous; born in Australia; does not speak a language other than English at home; has completed Year 12 but does not have a post-graduate degree; lives in neither an advantaged or disadvantaged suburb (third quintile); and lives in a capital city. Coefficients that are statistically significant at the 1 per cent level of significance are labelled ***; those significant at the 5 per cent level of significance are labelled **, and those significant at the 10 per cent level of significance are labelled *.

Endnotes

[1] https://www.bsg.ox.ac.uk/research/research-projects/covid-19-government-response-tracker

[2] https://www.pewresearch.org/science/2021/09/15/majority-in-u-s-says-public-health-benefits-of-covid-19-restrictions-worth-the-costs-even-as-large-shares-also-see-downsides/

[3] The income categories were: $0 to $24,554 ($0 to $472 weekly); More than $24,554 to $38,896 (more than $472 to $748 weekly); More than $38,896 to $52,884 (more than $478 to $1,017 weekly); More than $52,884 to $69,524 (more than $1,017 to $1,337 weekly); More than $69,524 to $88,452 (more than $1,337 to $1,701 weekly); More than $88,452 to $109,304 (more than $1,701 to $2,102 weekly); More than $109,304 to $134,784 (more than $2,102 to $2,592 weekly); More than $134,784 to $168,688 (more than $2,592 to $3,244 weekly); More than $168,688 to $222,300 (more than $3,244 to $4,275 weekly); or More than $222,300 (more than $4,275 weekly)

[4] https://www.abs.gov.au/statistics/economy/price-indexes-and-inflation/consumer-price-index-australia/latest-release